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Software Testing Foundations

A Study Guide for the Certified Tester Exam

- Foundation Level
- ISTQB compliant

2nd Edition

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Foreword to the First Edition

by Rex Black

I've been in the software and systems engineering business for over twenty years, with most of that time spent as a tester. In the 1980s, when I shifted my career emphasis from programming and system administration to testing, the resources were pretty limited. There were a few books by testing pioneers such as Boris Beizer, Bill Hetzel, Glenford Myers, and Bill Perry. Some of these books were – and remain – good resources. Someone new to the field could cover the entire software and systems testing library in a few months of reading.

Not any more. Now we have dozens and dozens of books out there on testing. You can read a book on testing specific kinds of applications, like Web applications and embedded applications. You can read a book on testing in formal settings and informal settings. You can even read a book or two on test management.

However, every professional needs to start somewhere. Every profession needs its foundation. The profession of software and systems testing needs books that provide the basic techniques, tools, and concepts. This is one such book.

This book will provide you with a solid practical foundation for your work and study of testing. Software and system testing suffers from a serious gap between best practices and common practices. If you're someone who is making a living from doing testing but haven't gotten around to reading a book, why not start with this one?

The authors wrote this book using the International Software Test Qualification Board's Foundation Level Syllabus as an outline. So, if you're pursuing test certification, I recommend this book. You can get certified according to the Foundation Level Syllabus by taking an exam offered through a recognized National Board. Such National Boards include the American Testing Board, the Indian Test Board, and the Israeli Test Certification Board, to name three such boards that I serve on.

This book would also make a fine textbook for a college course. If you're a professor looking for a good testing textbook, both you and your students may find this book a good choice.

This book should prove especially useful to you if you work on inhouse system development. The discussion on the role, techniques, and importance of requirements specification and acceptance testing in such environments is excellent. Of course, we don't always find ourselves working in organizations that have the overall system lifecycle process maturity that underpins this book. However, assuming that the testing process is part of a larger set of mature, well-managed development, maintenance, and deployment processes is a smart way to keep the book from spiraling into a complex discussion on how testing can adapt to dysfunctional organizations.

One problem we face in the testing profession is the lack of a universally-accepted glossary. That leads to a lot of discussion and confusion. The authors deal with that by providing definitions for their terms, based on the International Software Testing Qualification Board's glossary. I found a lot that I liked in this book. It provides a good description of what software and systems testing is. It explains not just the best practices and techniques, also the whys and hows of these techniques.

If you've read my books, *Critical Testing Processes* and *Managing the Testing Process*, you know that I like case studies and examples. If you've taken my training courses, you've worked through exercises based on real-world examples. This book uses a well-described, practical, true-to-life running case study to illustrate the key points. That helps bring the material to life and make it clear.

I also liked the survey of the commonly-used and commonly-useful black box and white box techniques. The authors also provide good brief discussions of some of the more unusual – but sometimes useful – techniques, too. If you're an analyst or test manager, this should help you understand the essential techniques of test design.

There's also a good survey of test automation tools and techniques. The authors give a balanced perspective that neither bashes nor boosts the tools. With so much hype and confusion surrounding this topic – and, sadly, so many failed attempts at test automation – the authors' dispassionate approach, with plenty of cautionary notes, is refreshing.

Finally, it's nice to see a test book that includes a broad, helpful discussion of test management. Other than my own two books, this topic hasn't

gotten much attention. If you're a tester or QA analyst who needs to understand the management perspective, this book should help.

As you can see, this book introduces many topics in the field of software and system testing. In spite of that, this is a relatively short book, which makes it more approachable for busy test professionals. As a writer, I know it's hard to write books that are both comprehensive and brief. The authors have struck a good balance in the level of detail they provide, focusing on the needs of the target audience. This book will provide a solid foundation for you when you read more advanced books on specific topics like test management, test design, test automation, or testing particular kinds of applications.

Bulverde, Texas, June 2004

Rex Black, President of the ISTQB